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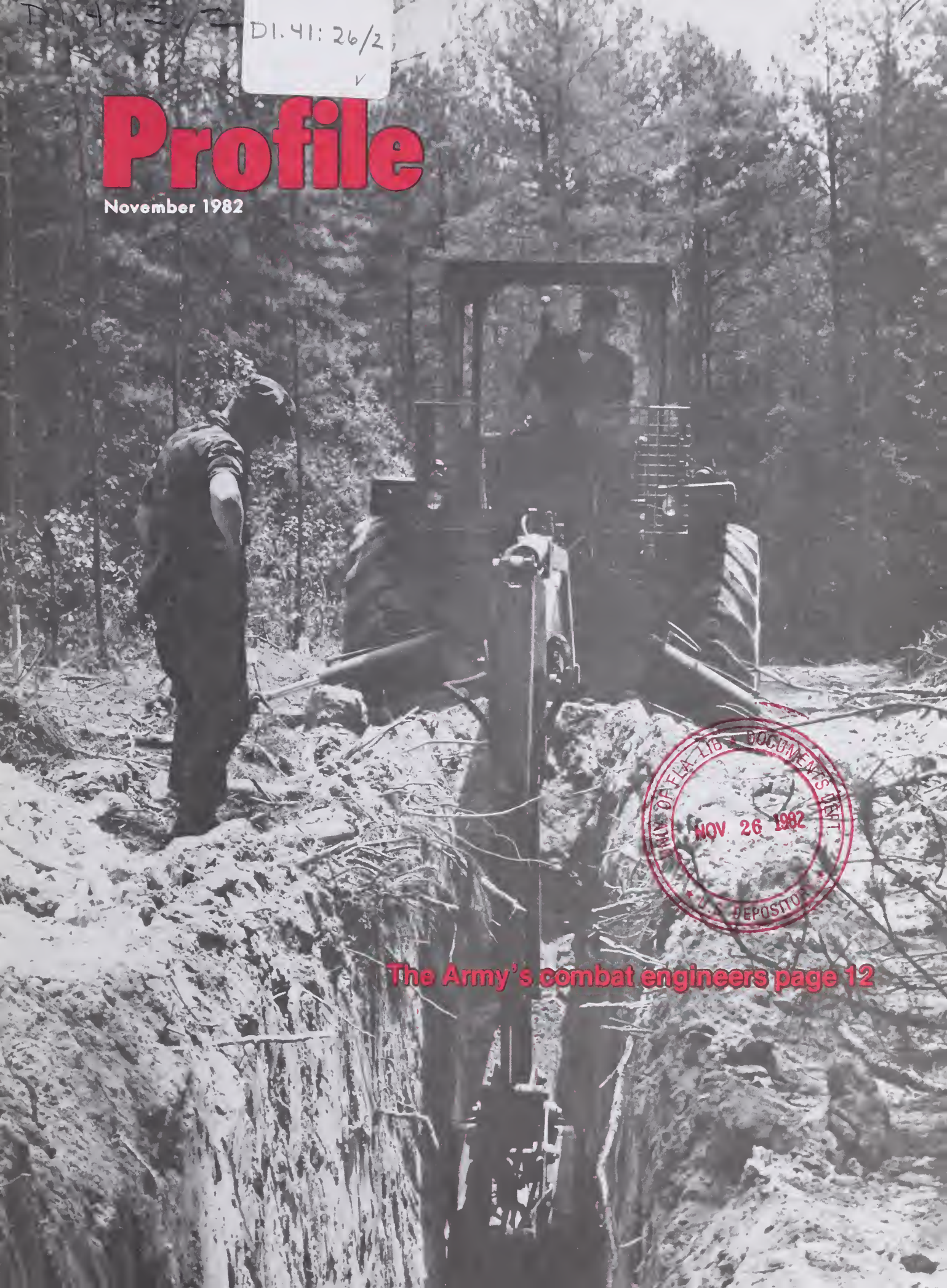
Profile

November 1982



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The Army's combat engineers page 12

ROTC scholarships offered

Attend one of the top colleges or universities in the United States FREE. This means having your tuition, books, and most fees paid in full, while earning a $100 monthly allowance.

The Reserve Officers' Training Corps Scholarship Program offers you this opportunity, but time is running out fast to apply. The deadline for scholarship applications December 15.

The ROTC Scholarship Program sponsored by the Air Force, Army, Marine Corps and Navy will offer more than 4,500 four-year scholarships to high school seniors this year who qualify and apply.

Students competing for ROTC Scholarships are required to take either the Scholastic Aptitude Test or the American College Test as part of the application process. Scholarship winners are chosen using these scores and other factors such as high school academic records and extracurricular activities.

A four-year active duty obligation is incurred upon acceptance of a scholarship. Students are commissioned and serve their obligation upon completion of degree requirements.

The ROTC Scholarship Program offers a way for an individual to receive an undergraduate degree at a top institution at little or no cost to the student.

Students may apply to any or all services for a scholarhip. The following addresses may be used to acquire scholarship application forms:

AIR FORCE	Office of Public Affairs Air Force ROTC Maxwell AFB, Ala. 36112
ARMY	Army ROTC P.O. Box 9000 Clifton, N.J. 07015
MARINE CORPS	Commandant U.S. Marine Corps (Code MRRO-6) Headquarters, U.S. Marine Corps Washington, D.C. 20380
NAVY	Commander Navy Recruiting Command (Code 314) 4015 Wilson Blvd. Arlington, Va. 22203

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Page 4—A look inside the Marine Corps' Computer Science School

Marines spend hours poring over code books and key board terminals to reach their ultimate goals: taking charge of a computer. The Marine Corps' Computer Science School at Quantico, Va., helps Marines reach their goals through self-paced courses.

Page 8—Navy pharmacy school trains caring professionals

In life and death situations the medication must be right. These dedicated men and women make it that way. They are the Navy's pharmacy technicians.

Page 12—The Army builds their engineers through hard work and schooling

The Army's combat engineer battalions place heavy emphasis on their missions, both in peacetime and in war. The Army engineers are experts in heavy equipment, construction and demolition. These men get sore, tired and dirty, but they love their job.

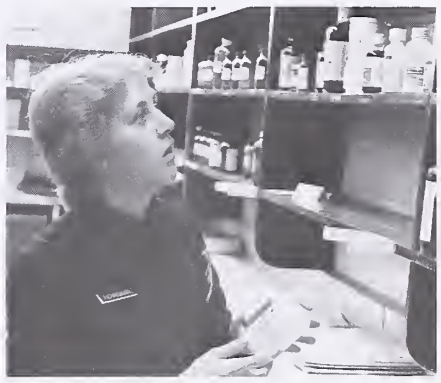
Page 16—Air Force navigators—plotting into the future

The silver navigators wings on an Air Force uniform identifies these officers as having special skills earned through hard work and special schooling.

Page 20—Boatswain's mates—Coast Guard's jacks-of-all-trades

Boatswain's mates are the jacks-of-all-trades in the Coast Guard. They receive their school training at Yorktown, Va., but their learning doesn't stop there. Constant, on-the-job training makes them tops at their work, whether saving lives or simply keeping their boats in the best of condition.

FRONT COVER: An Army combat engineer soldier uses a backhoe to dig a trench to lay sewer pipes. Photo by Capt. Lee J. Hockman.



BACK COVER: A Navy pharmacy technician prepares to fill a prescription at Portsmouth Naval Hospital, Va. Photo by Debra Evans.

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A LOOK INSIDE THE MARINE CORPS'

by Staff Sgt. Dave Marriott

photos by Staff Sgt. D.A. Washington

COMPUTER SCIENCE SCHOOL

A computer room filled with large consoles covered by various brightly colored lights, blinking on and off in perfect rhythm to a metallic sounding voice answering questions from a human being seated behind a keyboard terminal? Maybe on Star Trek, but not at the Computer Science School aboard Marine Corps Development and Education Command, Quantico, Va.,

The Computer Science School is tasked with training Marines in computer system analysis, software design, programming and computer equipment operation in support of Marine Corps automated information systems.

Twenty-seven courses are taught by the Computer Science School instructors ranging in difficulty from the entry level courses such as the Computer Operators Course and the COBOL Programming Course to the highly sophisticated Systems Programmer Course. Marines, officer and enlisted, receive their initial computer training at the Computer Science School, with many returning throughout their career for additional courses.

Although the advanced courses are available, the school's "bread and butter" courses are the Computer Operators Course and the COBOL Programming Course according to Marine Corps Chief Warrant Officer J.P. Williams of the Computer Science School's Training and Operations Section.

In talking with some of the Marines who have attended the Computer Science School, additional insights were obtained. Marine Corps Staff Sgt. Sherrill See, the Technical Training Noncommissioned Officer at the Marine Corps Finance Center, Kansas City, Mo. said "Most people think that all you have to do to be a computer programmer is to sit in fornt of a key board and type in a program. But that's just not true, there is much more work involved than that."

The computer programmers course is a mixture of classroom and practical application instruction. Due to the nature and complexity of the course material, the programmers course is a self-paced course.

"Some of the students coming to us have a couple years of college and can complete the course quite rapidly, while others don't learn as quickly and take more time. Some students are faster than others, but what I feel is most important is

STC 3670 tape drives are a familiar sight for the computer operator.

A programmer retrieves information off the computer's master console.

that all programmer students work through the course at their own pace, the best learning pace for them," commented Chief Warrant Officer Williams.

Several computer languages are taught to the programmers at the Computer Science School. The most popular courses involved are the Common Business Oriented Language (COBOL) and the Assembly Language Code (ALC).

COBOL is a business language. It is universal and can be used between computer systems. COBOL is used in business type situations such as supply, disbursing or payroll. It reads much like the English language.

Assembly Language Code is a more complex language. It consists of an intricate code. Assembly Language Code is dependent on the type of computer for which it is written.

The third and most complex language taught is FORTRAN (formula translation). FORTRAN is a scientific or mathematical language that deals primarily with calculations. It is a language similar to calculus used mainly on scientific type projects.

While learning computer language, the computer programmer students are given the criteria needed to write a workable computer program. Throughout their training students are given Criteria and Progress Checks by their instructors to ensure they understand the information they've been taught and know how to put it to practical use.

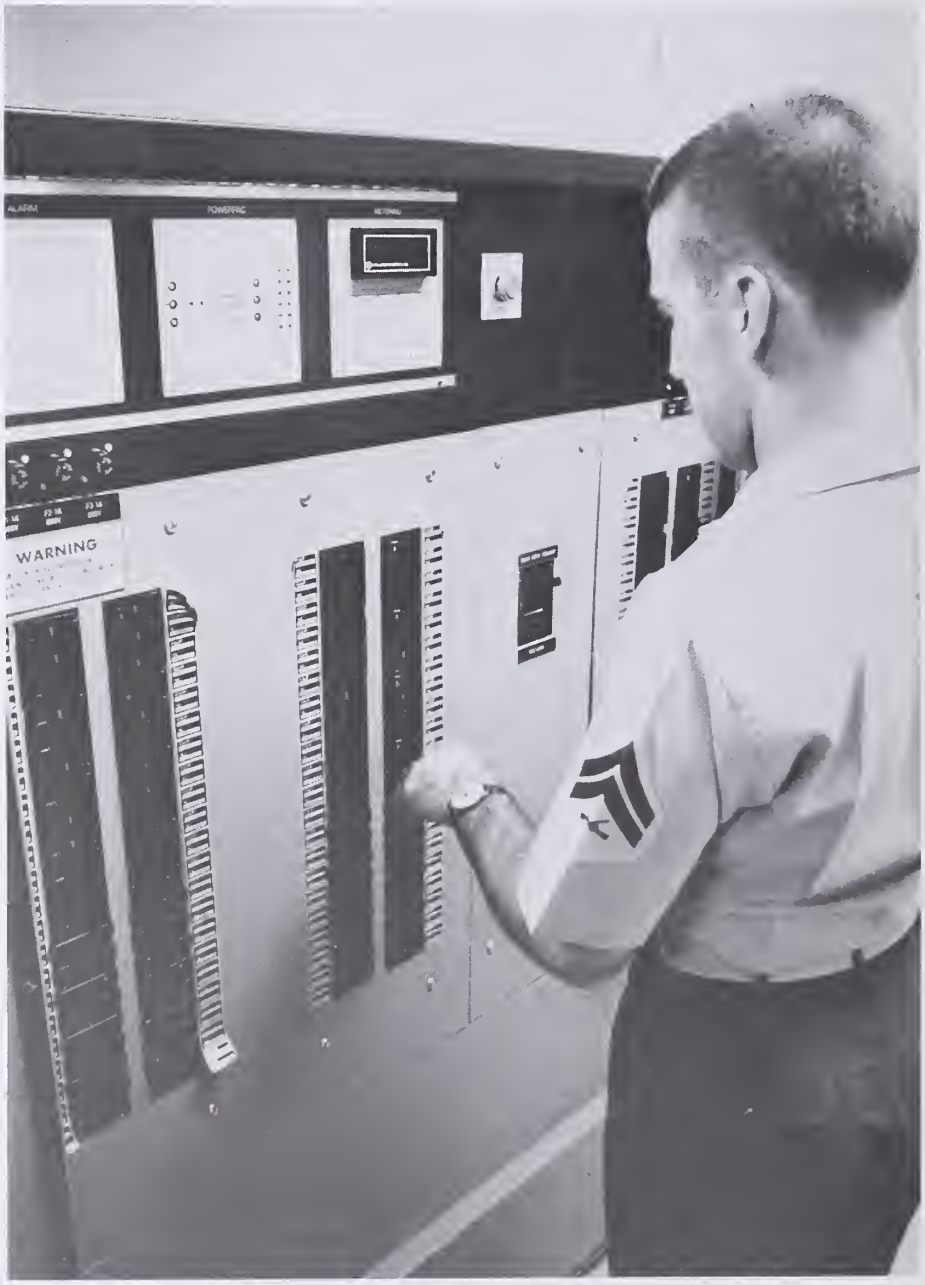
Once the programmer students have successfully met all the criteria and progress checks they are graduated.

The Computer Operators Course is a four-week formal classroom taught course.

The operator student is taught the actual machinery of the computer. They become familiar with the use and maintenance of the computer's hardware such as the high speed printer, magnetic tape drive, magnetic storage devices, cardreader, cardpunch and computer console.

Computer operators are also taught computer console operation, manual program load, light monitoring and switch manipulation. The student learns the correct way to maintain and file the computer's software and magnetic tape.

Simply put, upon graduation, the computer operator student becomes the Marine that ensures



A computer operator monitors the Powerpac, a breaker unit for the computer.

the correct program goes in and comes out of the computer at the right time without any problems.

Students in both classes are taught on the AMDAHL V-7 computer system and the Series 1 computer. The AMDAHL V-7 is a conventional or permanently located computer while the Series 1 or "green machine" is a deployable computer that Marine Corps units take on field or combat exercises.

While attending the Computer Science School students are in an academic environment five days a week from 8 a.m. to 4:30 p.m. For students needing additional study time on the computer, the school remains open until 10 p.m. with an instructor on duty to answer questions and help with problems.

Although in an academic environment the students are given time to maintain their physical fitness and general military skills, periodic inspections and formations take place to ensure the students are maintaining their military appearance and bearing. Organized athletics help provide relaxation and a change of pace.

When they arrive at the Computer Science School many students have doubts as to whether they'll be able to operate a computer without years of training. Most find that learning to operate a computer is not as difficult as they expected, but rather a building block experience where one can start simply and work up in complexity at their own pace.

Once the basic skills are learned and put to use, Computer Science School trained Marines become highly motivated and professional computer personnel at their permanent duty stations.

As one computer operator, Marine Cpl. Daniel L. Rego, Marine Corps Central Design and Programming Activity, Quantico, Va., puts it "I love working with computers. They give me a sense of power. You are in charge of the entire system. You are responsible for everything that goes in and comes off of the system. Everything happens on your decision and what you tell the computer."

A computer programmer student applies practical application on the Marine Corps' mobile computer unit.

by Sgt. Deb Evans

photos by Tech. Sgt. Wilt Baker

Navy pharmacy school trains caring professionals

For the past four hours, you've been examined, tested and evaluated for your headache and upset stomach. You've seen a corpsman and doctor, each wanting another test. You know it's all necessary, but you don't feel well and all the waiting in lines, waiting rooms and hallways is getting to you. When you are finally released with prescription in hand, all you want to do is go home and sleep, not go through another line. At least this line will be both a pleasant and final wait.

The pleasant wait is because of the pharmacy technicians, highly trained and very much aware of their contact with the patients. The final wait is also pleasant because the pharmacy techs, responsible and resourceful, are confident in their knowledge of their profession and able to provide an excellent service the first time around.

This high level of competency is achieved by the application of many assets. First the pharmacy tech: They are trained and qualified hospital corpsmen with a demonstrated ability in health services, which is the first step in becoming a pharmacy tech. In order to become a hospital corpsman, applicants should have a scientific background or interest, teamwork ability, an interest in people, a good speaking and writing ability, as well as resourcefulness and physical strength.

Secondly, the level of advanced training the pharmacy tech receives is equivalent to two years of training condensed into a 23-week (seven to eight hours a day) of intensive curriculum, concentrated in areas such as pharmacology, chemistry and pharmacy calculations. There are only two Navy pharmacy schools in

Pharmacy technicians ensure patient eligibility prior to filling prescriptions.

existence—the Naval School of Health Sciences at Portsmouth, Va., and San Diego, Calif.

Thirdly, the instructors are experienced pharmacy techs and recognized as the "cream of the crop."

Chief Petty Officer Jem Lee, the senior instructor at the Naval School of Health Sciences, Portsmouth, spoke of the immediate saturation into all aspects of pharmacy that student receives, including a field trip to the Burroughs Wellcome Company.

Burroughs Wellcome Co., a major pharmaceutical manufacturer located in North Carolina, sponsors every class to a full day's trip to examine their facility and learn some of their manufacturing techniques.

Lee explained, "When the students come into the school, some of them are scared, it's a tough school. They soon lose this fear when they realize we lose very few people from our classes. There are plenty of opportunities for the students to receive extra help before, during and after all of our classes. We want each and every student to receive their rating. This field is critical right now. We must supply not only land based installations with techs, but also ships and some Marine Corps installations as well. At times this can leave shortages that must be filled."

Keeping the patient happy is stressed at pharmacy technician school.

Pharmacy tech training is long and arduous. Students such as Seamen Perry Johnson, Michael Wise and Rebecca Richardson all confirmed the difficulties of the training. But, then you only get what you pay for and if you strive for the best in health services it has to be earned.

Washington State University acknowledges the value and competency of the training, Lee said. The Washington State Board of Pharmacy now recognizes the pharmacy tech graduates and will license the techs upon application for full accreditation in the Washington state civilian community.

Petty Officer 1st Class Carlos Nunez an instructor at Portsmouth states, "We stress a great deal of patient psychology to our students. Most people are not in a very good mood when they are ill and the pharmacy tech, being the last on a long list of people to see, can sometimes get the brunt of the patient's bad mood. It's a part of our job to leave the patient with a good feeling at the end of their visit. A smile and a good attitude can go a long way in achieving this goal. The ability to relate with people, even under stressful conditions, is stressed throughout their training."

Responsibility is an integral part of training as well. As Petty Officer 3rd Class Trena K. Mullis, a pharmacy tech at the Naval Regional Hospital, Portsmouth, explains, pharmacy techs are given the charge and responsibility of the pharmacy while on duty after normal working hours. "Unlike my civilian counterparts, I am totally in charge when standing duty. My decisions must be right. When a doctor calls to ask about or order a medication, I must be able to provide the correct information and be able to prepare any medication. We have a lot of reference material in the pharmacy to fall back on, but medications and procedures change so rapidly it can really keep you studying throughout your career. I feel like I will never learn it all. It keeps my mind very active and makes the time fly. I have always enjoyed working with people. This job gives you every opportunity to do so."

As further explained by Seaman Thomas O. Perez, also a pharmacy tech at the hospital, the work and duties of a pharmacy tech is not for everyone. There isn't a great deal of material reward. But there is a reward once a person gets "inside" by helping and knowing no one else can do your job. The hours are tiring and your exposure to the patient is constant, but that's what makes it a challenging, interesting job.

Perez states, "I may not stay in this field throughout my time in service, but the experience and the knowledge I have gained will be invaluable no matter which medical field I choose, civilian or military."

Pharmacy techs may apply for other advanced schools after a substantial time in their rating, such as the advanced hospital corps school and may then go on to become a physician's assistant.

As Perez stated, the job is not for everyone, but for the responsible individual who wants a challenging job, pharmacy tech can be just what the doctor ordered.

'When a doctor calls to ask about or order a medication the pharmacy tech must be able to provide correct information and fill any presciption'

The Army through

(Above and below) Spec. 4 Gregory Lacy, a general construction equipment operator, uses a backhoe to dig a ditch for a sewer line that will run to the Officer's Club.

story and photos by Capt. Lee J. Hockman

The formations of soldiers marching and running; the drill sergeants in their "Smokey the Bear" hats; the crack of rifle fire and the crump of grenades heard in the distance all readily identifies Fort Jackson, S.C. as an Army training installation.

What is not so readily apparent is what goes on behind the scenes in support of this fort. The hard work and many hours put in by other soldiers assigned to Fort Jackson not directly involved in training is not often realized.

The men of Company D, 548th Engineer Battalion (Combat Heavy) are just such soldiers. They go about their jobs with little fanfare but perform a vital mission for the post. They provide construction support to the fort.

Company D is a separate company whose parent organization is more than 130 miles away. The company has two equally important, but diverse responsibilities.

"Basically, we have two missions," said Capt. John Dorsey, company commander. "One is wartime and one is peacetime. In wartime we would deploy with the parent battalion which is stationed at Fort Bragg, N.C. We would support the 18th Airborne Corps with general engineering support, and deploy as infantry, if needed. Our peacetime mission is to provide general support to Fort Jackson as directed by the facilities engineer, and that's done mainly with

builds its engineers hard work and schooling

construction projects."

The 190-man company is organized into four parts. Headquarters, horizontal or earth-moving and two general construction platoons. The two general construction platoons are comprised of vertical construction specialties, such as carpenters, plumbers, electricians and masons. The horizontal construction platoon has the heavy equipment, including bulldozers, road graders, tractors and scrapers.

To prepare for the company's dual mission, a substantial amount of training is required to hone the necessary skills. Some of this preparation focuses on the individual soldier, with training being conducted in both general soldiering duties and job-specific skills. Job-specific skills are the use of hand and power tools by carpenters; the installation and repair of water lines by plumbers; and gradework principles and operation of machinery by heavy equipment operators; as well as maintenance and repair of equipment by mechanics.

"It's a monster," said 1st Lt. Roosevelt Robinson, the construction/training officer, in describing the difficulty in reconciling the company's dual responsibilities. His job is to juggle the available time to ensure the assigned projects are completed while ensuring the company is prepared for a possible deployment.

Training for new soldiers in the engineer career field begins with their assignment to Fort Leonard Wood, Mo. After initial training, they recieve four to 14 weeks of advanced training, depending on

(Above) Men from Company D use a portable gasoline powered pump to remove water from a recently excavated ditch. (Left) Spec. 4 Gregory Lacy empties another load of dirt from the backhoe as the ditch for the sewer line nears completion.

their specialty. In addition to instruction in their job-specific area, soldiers also receive general training in combat engineer skills including demolitions, minefields and field fortifications.

"Coming right out of advanced training at Fort Leonard Wood, they really don't have the expertise," said Capt. Dorsey. "They need a lot of hands-on training. They need a lot of time with the people who have had that type of training."

"I went to school for eight weeks to learn how to run a grader," stated Sgt. Kurk Renk, who operated a road grader for six years before becoming a squad leader in the earthmoving platoon. "Once you get to your unit, you've got people that will help you learn more. In each unit you learn a little more." Now as a supervisor, Sgt. Renk said it is his job to pass his knowledge on to new soldiers. "I feel that I'm helping other people to learn and it will better them."

"It's best to listen to your squad leaders and platoon sergeant," said 1st Lt. Stephen Monroes, the earthmoving platoon leader. "They have the practical expertise. They know the capabilities of the equipment. They know how to keep it running, what it does and how to best use it."

Unit training is designed to enhance the company's ability to function as an organization. Company D conducts field training exercises quarterly to practice their combat mission, concentrating on combat engineering skills.

"Mainly we cover the combat engineer side of the house on field exercises," stated Capt. Dorsey. "We do live demolition. We build a log obstacle, set charges on it and blow it up. We blow craters in the road and practice setting minefields."

The combat construction mission of the company calls on personnel to use the same skills as on the everyday job. The earthmoving platoon is tasked to grade roads, clear areas for emplacements and dig antitank ditches, all requiring skills operators gain doing everyday projects. The vertical construction platoons construct prefabricated wood and metal buildings to be used as operations centers or offices.

Soldiers attach a heavy chain to a building which is to be demolished. One mission of the engineer company is building demolition and salvage.

Other training includes alert and assembly exercises, which are held periodically to ensure the unit can be mustered within a short time. Surprise emergency and deployment readiness exercises are conducted two to three times a year to practice rapid mobilization or personnel and equipment for movement by ship, aircraft or rail. The full company must be prepared to move out within 72 hours.

The culmination of all training is the annual unit test, the ARTEP (Army Training and Evaluation Program), which determines how well the company can perform its combat mission. This is a graded exercise that requires the company to deploy to the field and operate

while accompanied by evaluators.

"A lot of the construction projects we get compare closely with the task in the ARTEP," stated Capt. Dorsey. "The basic engineer construction mission uses the same skills in both peacetime and war.

"Most of our projects are what you would consider minor construction, such as maintenance of ranges and building running tracks," Capt. Dorsey continued. "We get a lot of small carpenter jobs, like rehabilitation of buildings, as well as minor electrical and plumbing work. The biggest project we've had in vertical construction is the metal building."

Construction projects are assigned to the company by the post facilities engineer, who is responsible for all new construction and maintenance of buildings and grounds on Fort Jackson.

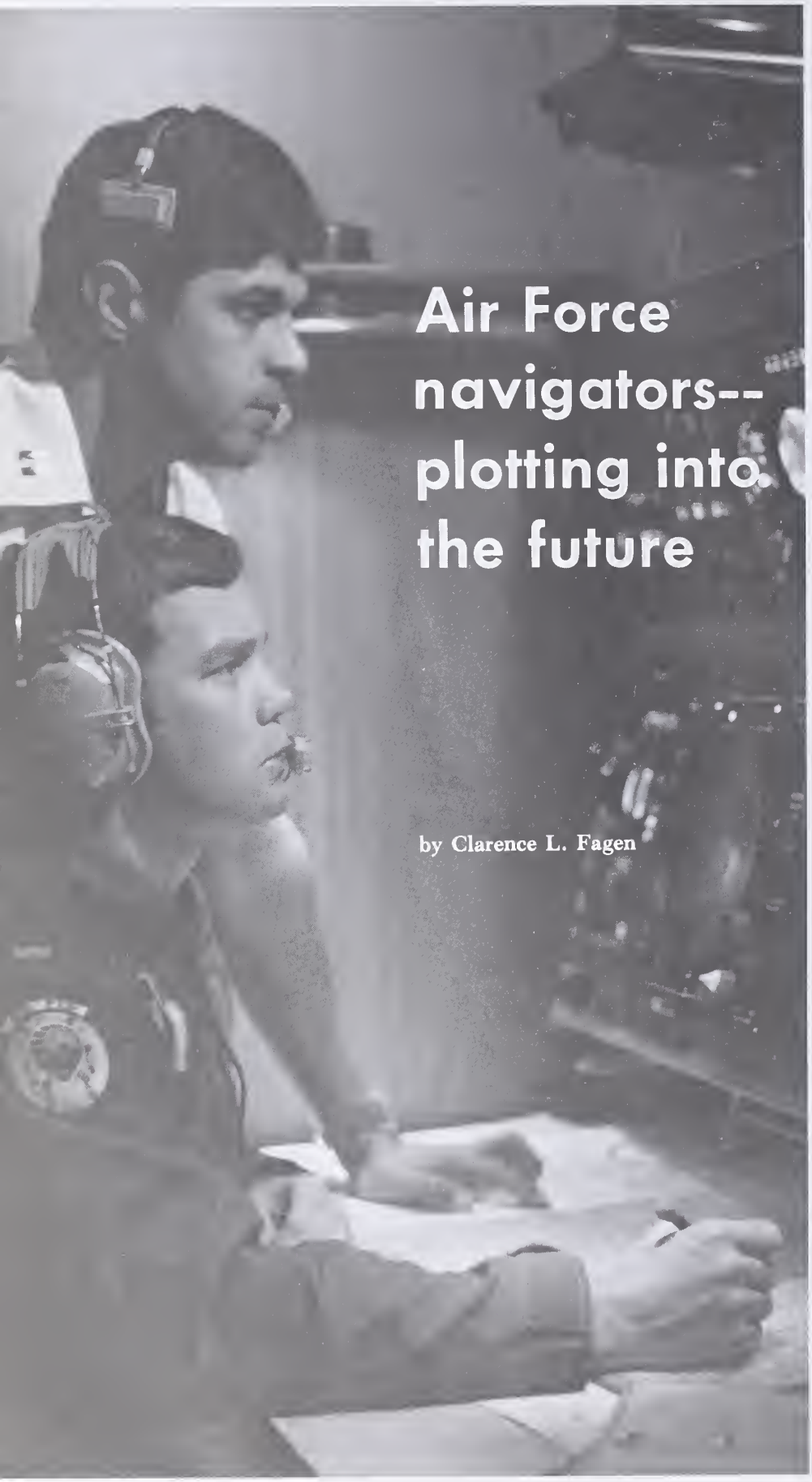
"We have a lot of repair and maintenance work," said Lt. Robinson. "Repairs on the guest house for instance, or upgrading the post nursery and day care center. A lot of projects are squad (10 men) sized. However, we have one project coming up where we have to reframe and reroof government quarters, which will take an entire platoon. Anytime you can get an entire platoon working together, it's good. Integrity—everybody is working together on one project, towards one end."

Sgt. Renk summed up the feeling that most engineers have about their job. "Everytime I'm in charge or even work on the project and the man who does the inspection says it looks good and he accepts the job, you feel good. You feel like you've really done something."

Doing something, is one thing combat engineers in the Army are sure of doing. Whether it be in the combat environment or doing small projects around the installation, they are gathering knowledge and skills to make them professionals.

Heavy equipment operator Sgt. Andrew Wallace applies the finishing touch by smoothing out the area with a road grader.

A two and one-half ton truck is used to pull down a section of an old building. Older structures on Fort Jackson, S.C. that are not scheduled for renovation are being torn down.



Air Force navigators--plotting into the future

by Clarence L. Fagen

The silver wings of a navigator on the uniform of Air Force officers identifies them as having special skills gained through hard work and special schooling. This special schooling for members of U.S. Forces, other U.S. government agencies, and selected foreign air force officers is provided by the Air Force's Air Training Command's 323rd Flying Training Wing at Mather Air Force Base, Calif.

Aircraft navigation has become more complex than merely finding the way to a destination, and the U.S. Air Force continues to lead in navigation training, with the best instruction, training aids and aircraft to insure that future demands of the Air Force are met.

With a global mission and the introduction of highly sophisticated equipment, today's Air Force navigator's must have their aircraft on target at a precise moment and be able to apply offensive and defensive warfare skills. Navigators are trained for airlift, reconnaissance, aerial refuelings, rescue, bombing, and fighter or electronic countermeasure aircraft.

Undergraduate training at Mather begins in the classroom where the student learns the fundamental principles of navigation. Classroom work is reinforced in the Learning Center equipped with a variety of audio and audio-visual instruction. Most of the Learning Center programs permit students to progress at their own pace.

Once the principles of navigation are mastered, the students are able to apply newly acquired skills in a computerized trainer, the T45 simulator, which has all the navigation position controls of an aircraft. The trainer is capable of projecting radar data for routes in the United States as seen from a navigator's position in an aircraft. It stores 11 billion bits of information, can simulate speeds to Mach 2, weather conditions, altitude, and other characteristics

Classroom instruction begins the 120 day training period for future Air Force navigators. Experienced navigators provide the basic information upon which navigator trainees will build their skills.

of actual flight. An instructor operates a master control that can input problems to sharpen the student's ability to respond.

Undergraduate navigator student 2nd Lt. Leon Shafer says, "The T45 is more difficult than actual flight because the navigator must provide instrument headings for departures and approaches, and make all radio calls. In some cases the T45 simulator provides even better training than the aircraft, because the simulator can be stopped to provide valuable on-the-spot instruction."

As students progress, they proceed to training in the T-37 and T-43 aircraft. The T-37 is a two-seat Cessna jet trainer and the T-43 is a Boeing 737 converted to a flying classroom with training positions for 12 students.

The undergraduate course is 120 days long with nearly 750 hours of instruction including 70 or 80 hours in the T-37 and T-43.

Col. Richard D. Paul, commander 323rd Flying Training Wing, and master navigator himself, discussed the future of Air Force navigators. He said, "Every crystal ball I've looked into shows the navigator's future is secure. Absolutely secure because, as the computer systems and the complexity of aircraft increases, it becomes more difficult for a single pilot or crew member to handle the aircraft and also make it a weapon system. They're just too complex—too many things to do at one time. The human body and mind can handle only so many tasks at one time. By having the navigator in even the most complex fighter or bomber of the future will make systems less vulnerable and more sure of getting on target. So despite what has been said about black box technology replacing the navigator—and they were saying it even when I graduated from navigator school some 23 years ago—the future of the navigator has never been more solid, in my belief, than it is for the 1980s. So my advice to prospective young navigators is to get in, become the finest officer you can, work as hard as you can on your job, and develop yourself into an outstanding navigator. You'll have a great challenge in the Air Force and you'll be doing something for your country."

Air Force undergraduate navigator students come from a variety of sources. The largest source is Officer Training School, they account for 31 percent; Air Force Reserve Officer Training

School is next with 23 percent, followed by the Air Force Academy with five percent.

Recent years' production rates peaked in fiscal 1974 at 1,356 navigators and reached a low of 472 in fiscal 1978. Since then, production has increased to where projections are for more than 1,000 navigators for this year, and show additional increases for the foreseeable future.

It's not only the growing need for navigators that makes the career field more attractive, but a 1974 change in the law opened new career opportunities to the navigator. Col. Paul explains how this affects the career field: "What the law change allows us to do as navigators is to command a unit that has flying as a primary mission. Navigators now have that opportunity; however, many people wonder why we don't have a lot of navigators commanding flying units. The answer is, you have got to grow your commanders as second lieutenants, and the navigator had not been working toward that goal; it wasn't a career goal open to them until 1974. The navigator force can now shoot for these targets, legitimately saying, 'I want to be a commander of a flying unit.' You couldn't say that just a few short years ago and it's going to take a while for us to grow the captains and majors through the appropriate operations, career challenges and leadership roles to where they become attractive as possible wing commanders.

"I think the person making the selection is going to pick the best officer for the leadership job—the commander position. So navigators have got to get themselves into a position where they are the most capable officers available, where commanders would be making a mistake by not selecting them."

In 1979 the navigator training program was tailored to meet the needs of the modern Air Force. Following the 120-day basic course, the Air Force students receive their wings. The new navigators then attend one or more advanced and/or graduate courses. These courses—advanced navigation, tactical navigation, navigator-bombardier training, and electronic warfare officer training—emphasize the specific skills navigators will use in their operational assignments.

Advanced navigation is an instruction to long range, overwater missions in multi-engine aircraft. The course is 20 days long and includes academics, simulator missions and flight missions in the T-43. All navigator graduates not assigned to tactical aircraft or electronic warfare officer training attend this course.

Tactical navigation (TAC-NAV) is an introduction to high-speed low-level flying. This course includes academics, simulators, and nine flights in the T-37. It is a 25-day course for navigators who will be assigned to fighter aircraft.

Aerospace physiology training familiarizes navigator students with the physical hazards of high altitude flight.

Students may also train in one of two graduate programs, navigator-bombardier training (12-15 weeks) or electronic warfare officer training (17 weeks). Officers who attend navigator-bombardier training must have first completed the advanced navigation course. Those attending electronic warfare officer training enter directly from undergraduate training or after completing TAC-NAV.

Whatever avenue a navigator's career takes following training at Mather, officer skills will play a role in assignment selections.

Maj. Gen. Keith D. McCartney, director of manpower and organization, headquarters, U.S. Air Force, and one of the Air Force's senior navigators, commented on career progression in a recent interview. He said, "How far you go in your career is up to you. How well you do your officer duties and how well you do your assigned duties will determine how far you go and how much success you have. The Air Force can be a very, very successful career for people who want to put forth a lot of effort, are dedicated to excellence, are professional, and give 100 percent-plus effort to be the best officer they can."

Navigator skills are taught by the Air Force, just like we teach pilots, supply officers, fuels officers, or maintenance officers. Col. Paul expanded on this saying, "These are all legitimate skills. What we want to teach by every means possible is officership. How to be an officer, how to contribute to the leadership demands the role of being a commissioned officer requires of you. When you take that commission, you raise your right hand and you are designated as a leader. As a second lieutenant you are thrust immediately into a leadership role. You immediately have the responsibilities of an officer. It's important that you try to fulfill the idea of the commission and all those unwritten things that go with it. The way you learn is to pay attention to what your boss is doing, what your peers are doing, and develop a sense of selflessness toward getting the mission accomplished."

Each person will have his or her own reason for entering the Air Force. For those who elect to make the Air Force a career, it is often the feeling of being part of a team. A team with definite goals—defense of this nation. As one officer said, "You may or may not think you are getting paid enough, that's not really the key issue. The issue is: Are you contributing something meaningful with your life?"

Learning centers and simulators are great for initial training, but the real test of skills is navigation in flight. Students get their first chance at navigation in the T-43.

Boatswain's Mates

Coast Guard's jacks-of-all-trades

Channel markers serve the boatswain's mate navigators as the yellow line on roadways serves drivers. The marker is also home for a fish-eating osprey.

by Spec. 4 Tracy Tanner

While giving a presentation to some children in Maryland, Chief Petty Officer Eugene E. Mayo, of the Yorktown Reserve Training Center asked what a boatswain's mate was. He received various descriptions that included pot bellies, bristly beards and big cigars. One similarity that each of the answers had was that the boatswain's mate was the person telling everyone else to go to work.

"And, that's what it boils down to," said Mayo, "we're the boss." A boatswain's mate in the Coast Guard holds the command enlisted rating. For example, the storekeeper would handle pay records and supply, a yeoman would handle personnel records, a corpsman would handle medical records. A boatswain's mate is the executive arm of the officer of the deck when underway. He is the person who would carry out specific orders pertaining to the deck and the functions of the ship.

The Coast Guard has only about 38,000 members (that's less than the New York City Police Department), and because it is spread all over the world, a boatswain's mate in the Coast Guard has to be more technically trained than in the past. And, unlike Navy boatswain's mates who specialize in one particular area of the field, Coast Guard boatswain's mates may see all aspects of the job.

Because of the vast knowledge expected of a boatswain's mate and the number of tasks put upon the Coast Guard, they are given

responsibility very early in their career. Whether it's the safe transportation of passengers and crew in a $250,000 boat, or the sole person in charge of a $2 million Coast Guard station, the boatswain's mate is responsible. It is very rare that any other enlisted rating would be given the responsibility that is laid on the boatswain's mates shoulders.

The Coast Guard differs from other services in that members fresh out of basic training do not proceed directly into their chosen specialty, but first serve as seamen. During this initial period, they decide by actually seeing different trades performed, which rating or specialty will suit them best.

A boatswain's mate for nearly 13 years, Mayo remembers his seaman days before deciding that he wanted to be a boatswain's mate. "I thought about being an engineer," he said. "It's a good rate, because," he laughs, "without them you've got to paddle. But, the engineer has only one responsibility and that's to keep the engines working. The boatswain's mate paints the boats, runs them, performs search and rescue, navigation, you name it, he does it. He has to be able to do so many things well and not just one."

Senior boatswain's mates, such as Mayo, learned their trade by 'the seat of their pants.' Today, seamen with the desire to obtain the rating can prepare to become a boatswain's mate through either 12 weeks of intensive training at Coast Guard Reserve Training Center, Yorktown, Va., or by training on the job under the guidance of experienced personnel and studying appropriate manuals and publications.

Mayo was an instructor at the school for 18 months before his present position of providing the school with properly working boats. He believes the school has become a necessity because of the more technical aspects of the job, such as radar. He still feels that the real learning comes from being out and working in the field, but strongly stresses that it is necessary to get the basics.

(Right) A boatswain's mate paints the visual identification slash or racing stripe on a Coast Guard cutter. (Below) Two boatswain's mates sand the boat's deck before welding.

Master Chief Petty Officer S.G. Ferro, command enlisted advisor, Portsmouth, Va., also a boatswain's mate of many years, was skeptical as to whether a basic school is necessary. "In my day, you learned by doing," said Ferro. "If you made a mistake, that was a good lesson learned and one that you'd never forget." But, as Ferro has talked with different members that have completed the course, he is convinced that the school is a necessary requirement in that young boatswain's mates are gaining confidence in their skills.

Petty Officer 2nd Class David W. Schweppe, an instructor at the Boatswain's Mate A School explained that the school is taught on the objective system. The students are given 10 objectives and must pass each of them. "It's like learning to fly, if a pilot has passed all of his tests and has an overall score of above 70 percent, but failed the landing test, no one is

(Above) The boatswain's mate prepares to splice double-braided nylon line. (Below) A boatswain's mate chips paint from the bow of a boat before applying a new coat of paint.

going to want to fly with him," Schweppe explained. "That is why we teach on the objective system."

Men and Women desiring to become boatswain's mates are taught light seamanship, shipboard organization, deck maintenance, surface preparation, boat lowering, and block and tackle. This is taught in the first phase of the course with constant supervision. It is very demanding and requires much discipline.

During the second phase of the course, instructors remain close by, but urge the students to perform the different tasks without as much instruction. When the third phase of the program rolls around, the student should be on automatic pilot and look to the instructor for an 'attaboy.'

Training with a more technical degree of knowledge required comes with the use of radar, for navigation and the Fathometer—which is also a tool for navigation used to determine the depth of the water. Scrambler gear is also used by boatswain's mates in order to communicate without letting others know what they're talking about.

'There are some tough times that you have to swallow, but there are always the lives that you do save.'

Along with the immense technical knowledge required of a boatswain's mate come the leadership qualities. The boatswain's mate is very often the responsible person in charge. He is the person that works with people. A very familiar phrase around any Coast Guard Station is, "Get me a boatswain's mate and 10 men, I need this done."

Boatswain's mates work at virtually every Coast Guard unit and Mayo explains, as with all jobs, being a boatswain's mate has it ups and downs. "I've rushed a pregnant woman across the water to a hospital and had to deliver the baby on the boat. That's a great feeling. But," he continued, "I've also had someone die while I was trying to keep him alive. There are some tough times that you have to swallow, but there are always the lives that you do save."

A career as a boatswain's mate in the Coast Guard can lead to jobs as pier superintendent, tugboat crewman, heavy equipment operator or a marina supervisor.

As a service, the Coast Guard is very proud. As in all services, members proclaim to be the best. Boatswain's mates are no exception, but they go a little farther; their claim: "We're the Best of the Best."

A Coast Guardsman receives instruction from a senior boatswain's mate.

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